

ELP:MM  
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DEPARTMENT OF COMMERCE  
BUREAU OF STANDARDS  
WASHINGTON

Letter  
Circular  
LC 96

(June 9, 1923)

SPECIFIC GRAVITY AND WEIGHT PER GALLON  
OF MILK AND CREAM

The specific gravities and weights per gallon given in the table are based on the values of specific gravity and coefficient of expansion determined by the Bureau of Standards and published in the Journ. Agric. Research, Vol. III, No. 3 (U. S. Department of Agriculture) Table II, page 257.

The specific gravity,  $20^{\circ}/4^{\circ}\text{C}$ , referred to in the table, means the specific density at  $20^{\circ}\text{C}$  ( $68^{\circ}\text{F.}$ ) in terms of water at its maximum density as unity, and specific gravity  $10^{\circ}/4^{\circ}\text{C}$  means the specific gravity at  $10^{\circ}\text{C}$  ( $50^{\circ}\text{F.}$ ) in terms of the same unit. These specific gravity values are numerically the same as density at  $20^{\circ}\text{C}$  and  $10^{\circ}\text{C}$  respectively in grams per millileter.

The specific gravity at  $20^{\circ}/20^{\circ}\text{C}$  ( $68^{\circ}/68^{\circ}\text{F.}$ ) corresponding to any percentage of fat can be obtained by dividing the specific gravity at  $20^{\circ}/4^{\circ}\text{C}$  by the density of water at  $20^{\circ}\text{C}$  (0.9982343).



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Percentage of fat (By Weight)	Specific Gravity 20°/4° C	Specific Gravity 10°/4° C	Pounds per gallon at 20° C (68° F)	Pounds per gallon at 10° C (50° F)
0.025	1.035	1.037	8.63	8.65
1	1.034	1.036	8.62	8.64
2	1.033	1.035	8.61	8.63
3	1.032	1.034	8.60	8.62
4	1.031	1.033	8.59	8.61
5	1.029	1.032	8.58	8.60
6	1.028	1.031	8.57	8.59
7	1.027	1.030	8.56	8.59
8	1.026	1.029	8.55	8.58
9	1.024	1.028	8.54	8.57
10	1.023	1.027	8.53	8.56
11	1.022	1.026	8.52	8.55
12	1.020	1.025	8.50	8.54
13	1.019	1.024	8.49	8.54
14	1.017	1.023	8.48	8.53
15	1.016	1.022	8.47	8.52
16	1.015	1.021	8.46	8.51
17	1.014	1.020	8.45	8.50
18	1.013	1.019	8.44	8.49
19	1.012	1.018	8.44	8.49
20	1.011	1.017	8.43	8.48
21	1.010	1.017	8.42	8.48
22	1.009	1.016	8.41	8.47
23	1.008	1.015	8.40	8.46
24	1.007	1.014	8.40	8.46
25	1.007	1.014	8.39	8.45
26	1.006	1.013	8.39	8.45
27	1.005	1.012	8.38	8.44
28	1.004	1.012	8.37	8.44
29	1.003	1.011	8.36	8.43
30	1.002	1.011	8.36	8.43
31	1.001	1.010	8.35	8.42
32	1.000	1.010	8.34	8.42
33	0.999	1.009	8.33	8.41
34	.998	1.008	8.32	8.40
35	.998	1.008	8.31	8.40
36	.997	1.007	8.31	8.40
37	.996	1.007	8.30	8.39
38	.995	1.006	8.30	8.39
39	.994	1.005	8.29	8.38
40	.993	1.005	8.28	8.38

